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(54) Title: A PROCESS FOR THE PREPARATION OF ACYLPHOSPHINES

$$R_{1} = \begin{bmatrix} R_{3} \\ I \end{bmatrix}_{2-m} \begin{bmatrix} O \\ II \\ C - R_{2} \end{bmatrix}_{m} \qquad (I),$$

$$R_{1} = \begin{bmatrix} R_{3} \\ P = 1 \end{bmatrix}_{2-m} Y \end{bmatrix}_{m} \quad (II),$$

(57) Abstract: A process for the preparation of acylphosphines of formula (I) wherein m is 1 or 2; R1, R2, and R3 are organic residues derived from aliphatic or aromatic hydrocarbons; by (1) reacting organic phosphorus halides of formula (II) wherein Y is Br or Cl, with an alkali metal in a solvent in the presence of an activator, wherein the alkali metal is present in the form of a dispersion of alkali metal particles having a mean particle size of ≤ 500 µm in the solvent, (2) subsequent reaction with acid halides of formula (III) which process is carried out without isolation of the intermediates. Preserably, R1, R2 and R3 are independently from each other phenyl, naphthyl and bi-phenyl, being unsubstituted or substituted by one to five halogen, C1-C8 alky and/or C1-C8 alkoxy. Most preferably,  $R_1$  and  $R_3$  are phenyl and  $R_2$  is 2,4,6trimethylphenyl. The alkali metal is preferably sodium, the activator is preferably chlorobenzene and/or n-butanol.